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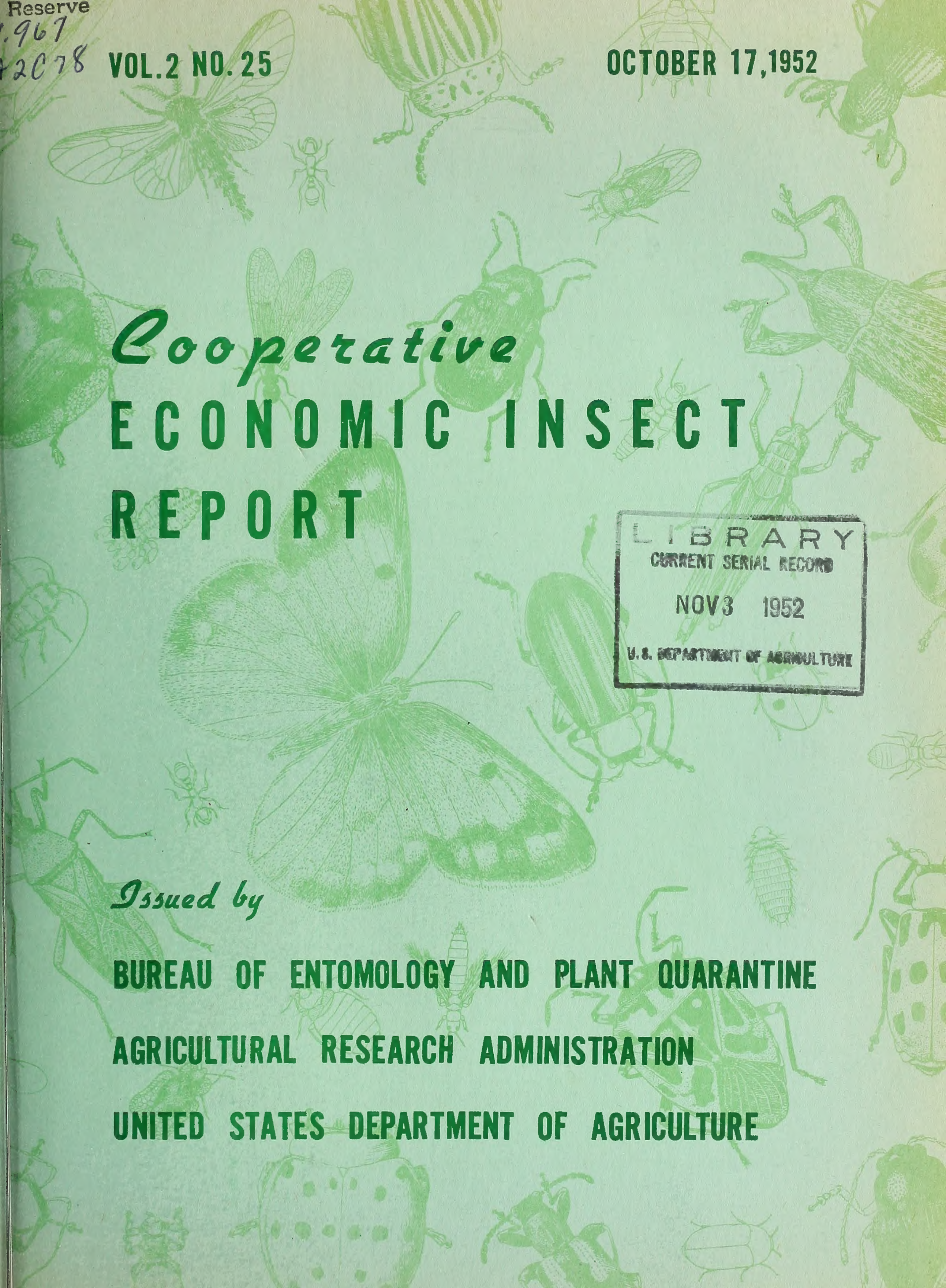

Cooperative ECONOMIC INSECT REPORT

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DIVISION OF INSECT DETECTION AND IDENTIFICATION

SECTION OF ECONOMIC INSECT DETECTION AND REPORTING

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Bureau serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 2 October 17, 1952 No. 25

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

FALL ARMYWORM destructive on oats and grasses in Mississippi. (page 339)

CITRUS INSECT conditions in Florida. (page 342)

COTTON INSECT determinations. (pages 345-46)

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The Committee on Insect Surveys of the American Association of Economic Entomologists at its meeting in June recommended that every possible effort be made to develop and utilize standardized insect survey methods which would encourage uniform interpretation. The need for an accepted yardstick for measuring insect prevalence for the preparation of outlook material is becoming increasingly important. Entomologists from Maine to California should be able to read and understand results of insect surveys by the same yardstick. The Section will serve as a clearing house for assembling information that will aid in the formulation of standard methods for making insect surveys. Accepted and dependable methods have been devised for some insects such as grasshoppers, chinch bugs (see page 340), and European corn borer. Short write-ups covering accepted survey methods will be published in the future for the use of entomologists and to better acquaint all workers with methods now in use. As additional standard methods of surveying for other economic pests are established through cooperative procedures, the information will be carried in the Report.

WEATHER FOR THE WEEK ENDING OCTOBER 14, 1952

Light scattered showers occurred in the Atlantic Coastal States during the passage of a cold front on the 7th. From the 8th through the 11th a weak low pressure system, that moved northward along the Atlantic Coast, produced general rains along the Coast to southern New England and in interior sections from the Ohio Valley to the Gulf. In much of the Southeast totals exceeded an inch. Light showers fell in some sections of the north-central interior on the 12th and 13th, but little or no rain fell in the remainder of the country during the week. This is the third consecutive week with no important rains west of the Mississippi River, and rain is badly needed throughout the area to restore soil moisture.

Fair weather with above normal temperatures again prevailed in the far West and temperatures in the Plateau region averaged from 5° to 10° above normal for the week. East of the Rocky Mountains temperatures were much below normal at beginning of the week, and although moderating to near normal levels by the end, averages for the week were 10° below normal in parts of the South and 4° to 6° elsewhere. Early season low temperature records were recorded at many stations in the Midwest and south-central areas on the morning of the 7th and 8th, with freezes as far south as northern Arkansas and Tennessee. (Summary Supplied by U. S. Weather Bureau).

* *

Reports in this issue are for the week ending October 11 unless otherwise designated.

CEREAL AND FORAGE INSECTS

EUROPEAN CORN BORER (*Pyrausta nubilalis*) -- KENTUCKY - Fall population survey indicated following borer population averages per 100 stalks: southwestern area, 214; north-central area, 146; central area, 155. (J. G. Rodriguez). TENNESSEE - Scattered severe damage from lodging in north Middle Tennessee. This injury caused by second-generation borers. (R. P. Mullett).

GRASSHOPPERS (Acrididae) -- IDAHO - Approximately 60,000 acres in the Salmon area infested with grasshoppers ranging from 1 to 2 per square yard. Indications of heavier population earlier in season. Species in this district include *M. mexicanus, M. bivittatus, M. femur-rubrum, M. packardii, Ageneotettix* sp., *Hesperotettix* sp., and *Camnula pellucida*. (J. R. Dutton, September 14). KANSAS - Second-generation *Melanoplus mexicanus* adults and nymphs generally increased in old wheat stubble and volunteer wheat in western area during September. Present populations range from 4 to 8 per square yard. (J. R. Dutton). NORTH DAKOTA - Between 650 and 700 sections of land in Cartwright area of McKenzie County continue heavily infested with nymphs. Populations per square yard vary from 15 to 600. Principal species: *Psoloessa delicatula, Xanthippus corallipes, Opeia obscura*. (J. R. Dutton). FLORIDA - American grasshopper (*Schistocerca americana*) moderately abundant on kudzu in Gadsden County area. (F. E. Guthrie).

CORN EARWORM (*Heliothis armigera*) -- KENTUCKY - Has been abundant over State in sweet corn and field corn. (W. A. Price). OHIO - Together with European corn borer heavily infesting late sweet corn at Columbus. (F. H. Harries).

FALL ARMYWORM (*Laphygma frugiperda*) -- MISSISSIPPI - Small larvae found in oat fields, where infestations heavy enough in some places to destroy all plants above surface of soil. Larvae also in pastures but damage lighter, Oktibbeha County. Infesting oats, pastures and lawns in Jones County. Considerable damage some places. Especially destructive to rye grass in Jackson and George Counties. Also infesting Bahia, fescue and other grasses. (Bennett, Bond, Pepper).

A LEAFHOPPER (*Dikraneura carneola*) -- UTAH - Light injury to winter wheat at West Copperton in 2 large fields. Light infestations common on winter wheat in Tooele and Salt Lake Counties. (G. F. Knowlton).

SURVEY METHODS -- CHINCH BUG

Cooperative surveys to determine populations of hibernating chinch bugs are made annually in several Central States. The work is conducted during November and December in areas suspected of harboring infestations. Overwintering occurs in several species of bunchgrasses, including little bluestem, big bluestem, and broomsedge. Five samples of bunchgrass are collected at widely separated points in each county surveyed. Each sample consists of a bunch of grass including the crown, from 3.5 to 4.5 inches in diameter, which is cut from the sod clump with a tilling spade. After trimming, the sample is placed in a double paper bag on which the location, date, and other pertinent details are recorded. By examining samples of the grass clumps in the laboratory, hibernating bugs are detected and abundance determined. As counts are made the number of bugs in the sample is converted to a number per square foot and rated according to the following table:

Classification	Number of bugs per square foot	Rating
Non-economic	0 - 250	1
Light	250 - 500	2
Moderate	500 - 1,000	3
Severe	1,000 - 2,000	4
Very Severe	2,000 or more	5

A rating is assigned to each county based on stop ratings and percentage of land under cultivation in the county. The greater the percentage of cultivated land the less protective cover available for hibernation and, consequently, a reduced population in comparison to crops that may be attacked.

Information obtained from these surveys provides a basis for preliminary estimate of control needs as well as a record of hibernating populations; however, weather conditions the following spring determine the severity of infestations. (C. W. Shockley).

LYGUS BUGS (Lygus spp.) -- UTAH - Still numerous on many succulent crops in Tooele and Salt Lake Counties. Nymphs extremely abundant in 2 alfalfa fields in Erda area where seed prospects have been destroyed. (G. F. Knowlton).

PEA APHID (Macrosiphum pisi) -- UTAH - Generally in moderate numbers this season; however, some injury to succulent alfalfa occurring in northern areas due to very high populations. High populations observed at Erda, Magna and Salt Lake City. (G. F. Knowlton).

FRUIT INSECTS

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) -- OHIO - Injury by third-brood larvae has increased markedly during first 10 days of October, at least in two northern area orchards. (C. R. Cutright).

A PEACH LEAF MINER (Phytomyza sp.) -- OHIO - Approximately 41 percent of third-brood larvae had pupated in northern area by October 9. Populations much lighter in Berlin Heights area than in 1951. (R. W. Rings).

CHERRY LEAF MINER -- OHIO - An unidentified leaf miner on Montmorency and Richmond sour cherries observed in Berlin Heights area on October 6. The mine is a blotch type but no insects present at this time. (R. W. Rings).

CLOVER MITE (Bryobia praetiosa) -- WASHINGTON - Heavy infestations on foliage of cherry trees in Asotin County. (D. Brannon).

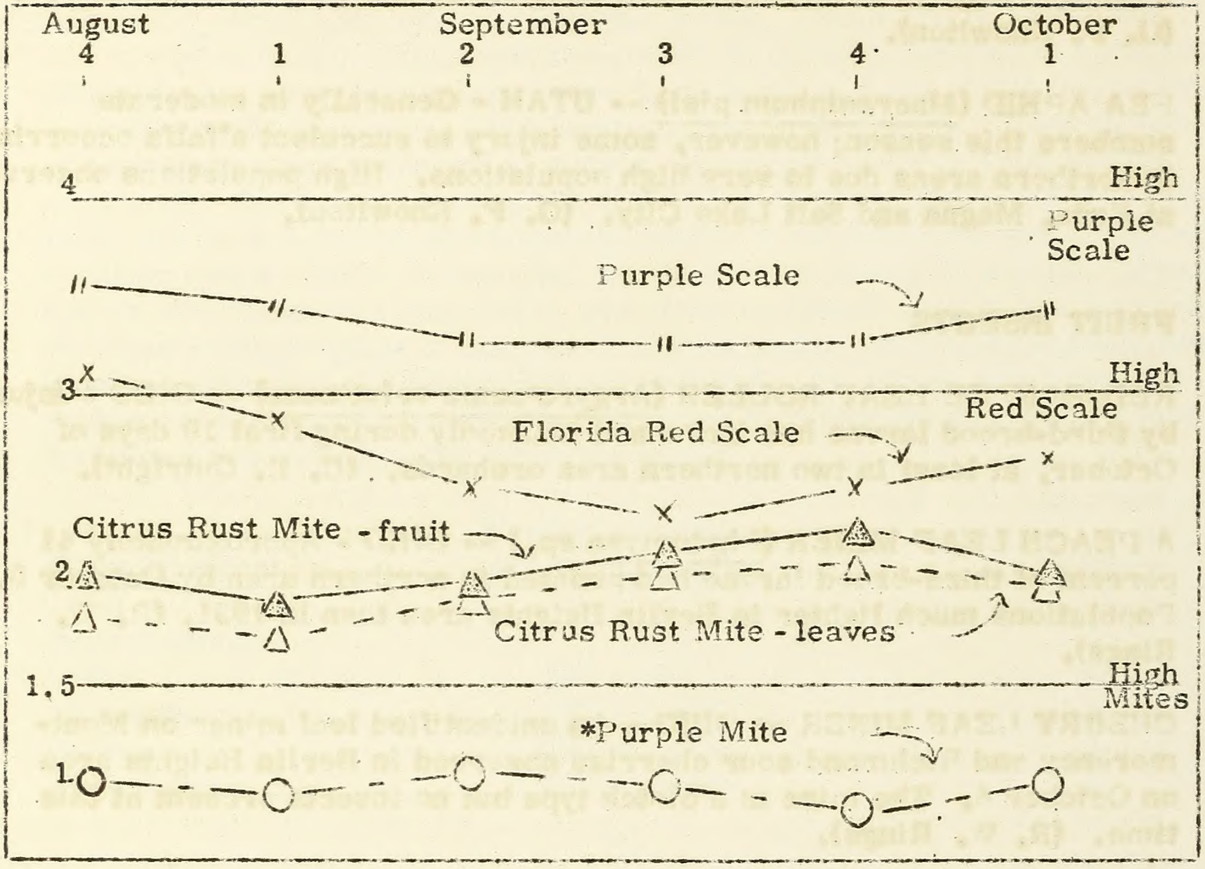
PEACH SILVER MITE (Vasates cornutus) -- WASHINGTON - Considerable silvering of peach leaves in Asotin County. (D. Brannon).

CODLING MOTH (Carpocapsa pomonella) -- WASHINGTON - Damage to apples heavier than during past several years in Asotin County. (D. Brannon).

JAPANESE BEETLE (Popilla japonica) -- FLORIDA - One beetle collected in trap at Drew Field, Tampa, July 25. Reported by W. H. Merrill. (W. Middleton, October 2).

CITRUS INSECT CONDITIONS-FLORIDA

Index of Scale and Mite Activity



NOTES: Activity level considered high if above 4.0 for purple scale (Lepidosaphes beckii), 3.0 for Florida red scale (Chrysomphalus aonidum), and 1.5 for mites. Scale indices are based on populations, number of groves showing increases or decreases from previous month, and percent of scale in stage 1 (settled crawlers). Mite indices based on populations and number of increases and decreases. Groves sprayed during preceding month not included in calculations. Activity during first week of October: Purple scale increasing, especially in West Coast District. Ninety percent of groves checked infested. Florida red scale increasing some, but activity still low except in Indian River and Upper East Coast Districts. Fifty percent of groves infested. Purple mite *(citrus red mite) Paratetranychus citri increasing with several groves heavily infested. Citrus rust mite (Phyllocoptruta oleivora) decreasing but still very high on leaves and fruit. Seventy-nine percent of groves infested.
(Pratt and Thompson)

TRUCK CROPS INSECTS

MEXICAN BEAN BEETLE (Epilachna varivestis) -- SOUTH CAROLINA - First colony of larvae found on fall-crop snap beans October 7, Charleston area. Insect not expected to be problem in commercial plantings this fall, however. (Reid, Cuthbert, Deen). FLORIDA - Considerable increase in population in Gadsden and adjacent counties. Control measures necessary. (L. M. May). OHIO - Causing moderate injury to beans at Chillicothe. (F. M. Harries).

LEAFHOPPERS -- NEW JERSEY - Incidence of yellows very high in lettuce in southern counties indicating poor leafhopper control when plants were in seedling stage. (O. Starnes). SOUTH CAROLINA - Light infestation (prob. Empoasca fabae) on snap beans in Charleston area. (Reid, Cuthbert, Deen). TEXAS - Large populations in two bean fields near Weslaco. (Wene and White). UTAH - Empoasca filamenta extremely numerous and discoloring foliage in one potato field at Erda. Still numerous in celery fields and on other vegetables in Davis and Utah Counties. (G. F. Knowlton). WASHINGTON - Rose leafhopper (Typhlocyba rosae) abundant on garden roses and manetti roses at Sumner. (C. F. Doucette).

BEAN LEAF ROLLER (Urbanus proteus) -- SOUTH CAROLINA - More abundant than usual on snap beans. Light to moderate damage some fields, eastern area. (Reid, Cuthbert, Deen).

CORN EARWORM (Heliothis armigera) -- FLORIDA - Moderately heavy infestations on string bean pods in Gadsden and adjacent counties. (L. M. May).

CABBAGE CATERPILLARS -- NEW JERSEY - Cabbage looper (Trichoplusia ni) damaging spinach in local areas. (O. Starnes). MARYLAND - Cabbage looper heavier than usual on cabbage and broccoli at Experiment Station Farm, Fairland, Montgomery County. (T. L. Bissell). SOUTH CAROLINA - Cabbage looper continues to damage unprotected cole crops in Charleston area, although a fungus disease is aiding in control. (Reid, Cuthbert, Deen). FLORIDA - Fairly heavy infestations of cabbage looper and imported cabbageworm (Pieris rapae) on collards in Gadsden and some adjacent areas. (L. M. May). TEXAS - Very abundant in cabbage fields near Weslaco. (Wene and White).

TOMATO FRUITWORM (Heliothis armigera) -- SOUTH CAROLINA - Relatively abundant on fall tomatoes. (Reid, Cuthbert, Deen).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) -- SOUTH CAROLINA - Injury continues in some plantings of snap beans, Charleston area. (Reid, Cuthbert, Deen).

COWPEA CURCULIO (Chalcodermus aeneus) -- TEXAS - Infesting blackeyed peas near Weslaco. (Wene and White).

CUTWORMS AND GARDEN WEBWORMS (Loxostege similalis) very injurious to onion seed beds south of Laredo, TEXAS. (B. H. Richardson).

LEAF MINERS -- TEXAS - Still very destructive on pepper; also found on blackeyed peas. Parasites are controlling miners in some fields near Weslaco. (Wene and White).

PICKLEWORM (Diaphania nitidalis) -- SOUTH CAROLINA - Light to moderate on unprotected cucumbers; heavier on squash, Charleston area. (Reid, Cuthbert, Deen). FLORIDA - Light on cucumbers and squash in Gadsden County area. (L. M. May).

MELONWORM (Diaphania hyalinata) -- SOUTH CAROLINA - Moderate infestation on unprotected cucurbits, Charleston area. (Reid, Cuthbert, Deen). TEXAS - Injurious numbers on squash near Weslaco. (Wene and White).

SQUASH BUG (Anasa tritis) and STRIPED CUCUMBER BEETLE (Acalymma vittata) abundant on squash and gourds at Chillicothe. (F. M. Harries).

GARDEN WEBWORM (Loxostege similalis) -- NEW JERSEY - Infestations general in spinach. (O. Starnes).

MOLE CRICKETS -- KENTUCKY - Caused some damage to potatoes in western area. (W. A. Price).

BEAN APHID (Aphis fabae) -- WASHINGTON - Fairly extensive colonies on various non-economic plants near Sumner. Also on Swiss chard in a home garden. Not a problem on beans this year. (C. F. Doucette).

ROSE APHID (Macrosiphum rosae) -- WASHINGTON - Populations have increased markedly during past two weeks on garden roses at Sumner. (C. F. Doucette).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) -- TENNESSEE - Scattered occurrence on ornamental shrubs in eastern area. (R. P. Mullett).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) -- TEXAS - Newly infested counties reported since October 3: Denton, Fannin, Grayson, Lamar, Panola, Red River and San Augustine in East Texas; Parmer County in the Panhandle. All finds made by gin trash inspection except in Lamar and Fannin Counties where adults taken in light traps. Moths also collected in light trap in Burleson County which is in the old quarantined area. (L. F. Curl, October 9; P. A. Glick, October 13).

LEPIDOPTEROUS LARVAE DETERMINATIONS --ARIZONA - Ninety-six larvae collected from cotton during August and submitted by W. A. Stevenson have been determined by J. G. Franclemont. Forty-nine were identified as loopers of the Autographa group and 47 as the bollworm, Heliothis armigera (Hbn.). Thirty of the bollowrms were collected at Buckeye, Maricopa County by L. W. Sheets; 17 at Safford, Graham County by W. Kauffman. Eighteen loopers were collected at Eloy, Pinal County by T. Mendenhall; 20 at Continental, Pima County and 11 at Safford, Graham County by W. Kauffman. (R. W. Harned).

STINK BUGS (Pentatomidae) -- ARIZONA - Four stink bugs collected on cotton at Continental, Pima County, August 13 by W. Kauffman have been identified by R. I. Sailer. Three were Thyanta custator (F.) and one was Euschistus spurculus Stal. It is not recalled that the latter species has been reported previously on cotton, although several other species of Euschistus are pest of this crop. E. spurculus is a small species reported to occur in Arizona, Mexico and Central America. (R. W. Harned).

SPIDER MITES ON COTTON IN THE CAROLINAS

L. C. Fife submitted for identification 17 vials of spider mites collected on cotton by C. V. Finklea on August 11 and 12, 1952. Septanychus texazona McG. was collected on 2 farms in Scotland County, North Carolina and on 13 farms in Darlington County, South Carolina. The two-spotted spider mite, Tetranychus bimaculatus, Harvey was collected on two farms in Hoke County, North Carolina and 4 farms in Darlington County, South Carolina. E. W. Baker, who made the determinations, found both species in 4 vials containing specimens from different farms in Darlington County, and suggested that mixed populations might have been found in all of the collections if more specimens had been collected or examined. In making collections of spider mites in a cotton field, it is desirable to include mites from many cotton plants and leaves. (R. W. Harned).

INSECTS AFFECTING MAN AND ANIMALS

FLIES (Tabanidae) -- FLORIDA - Tabanus atratus and T. nigrovittatus are more active in Alachua County than during any previous period this year; however, overall population of tabanids decreasing. Tabanus atratus egg masses heavily parasitized in Gainesville vicinity by Telenomus tabanivorus (Ashm.). (C. M. Jones).

BOXELDER BUG (Leptocoris trivittatus) -- UTAH - Causing annoyance in homes and buildings in many localities. (G. F. Knowlton).

TICKS -- UTAH - Many complaints of ticks on cattle this season from Washington County. Some trouble from ear ticks lately. (G. F. Knowlton)

CATTLE LICE -- UTAH - Numerous and building up on beef cattle and calves in several herds observed in Cache and Washington Counties. (G. F. Knowlton).

FOREST INSECTS

OYSTERSHELL SCALE (Lepidosaphes ulmi) -- UTAH - Severely damaging several large black willows in Erda. Many branches almost completely infested. (G. F. Knowlton).

APHIDS (Aphidae) -- UTAH - Very abundant and causing smudging of foliage on many birches this fall at Logan. Also numerous on linden. (G. F. Knowlton).